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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/559,531	12/02/2005	Yutaka Takeuchi	025416-00024	2704
4372	7590	10/29/2008	EXAMINER	
ARENT FOX LLP			ZHU, WEIPING	
1050 CONNECTICUT AVENUE, N.W.			ART UNIT	
SUITE 400			PAPER NUMBER	
WASHINGTON, DC 20036			1793	
			NOTIFICATION DATE	DELIVERY MODE
			10/29/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com

IPMatters@arentfox.com

Patent_Mail@arentfox.com

Office Action Summary

Application No.

10/559,531

Applicant(s)

TAKEUCHI ET AL.

Examiner

WEIPING ZHU

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-23 is/are pending in the application.
4a) Of the above claim(s) 20-23 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 13-19 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
3) ☒ Information Disclosure Statement(s) (PTO/ISD)
Paper No(s)/Mail Date 10/9/2008
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Status of Claims

1. Claims 13-19 are currently under examination, wherein claims 13 and 19 have been amended in applicant's amendments filed on August 14, 2008.

Status of Previous Rejections

2. The previous rejections of claims 13-19 under 35 U.S.C. 103(a) as stated in the Office action dated May 16, 2008 have been maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kajikawa et al. (US 4,309,277) in view of JP 2000-045061 as stated in the Office action dated May 16, 2008.

With respect to the amended feature of claim 13, it would have been obvious to one of ordinary skill in the art to start the heating by the glow discharge in the first step of Kajikawa et al. ('277) with expected success, because Kajikawa et al. ('277) discloses that the workpiece is heated by heat generated by the glow discharge and the heating element in the first step (col. 4, lines 18-35) without particularly limiting if the heating should be started by the glow discharge or the heating element (col. 4, lines 18-35).

With respect to the amended feature of claim 19, JP ('912) discloses measuring simultaneously both radiation and contact temperatures of a hot-rolling sheet (abstract)

Response to Arguments

4. The applicant's arguments filed on August 14, 2008 have been fully considered but they are not persuasive.

First, the applicant argues that Kajikawa et al. ('277) heats the workpiece only by the heating element at the time of start heating. Further, until the workpiece reaches the optimum temperature for nitriding, the powder of the heating element is reduced rather than increased in Kajikawa et al. ('277). In response, see the rejection of the amended feature of the instant claim 13 as stated in the paragraph above. Furthermore, the examiner notes that Kajikawa et al. ('277) discloses increasing the powder to the heating element while reducing the voltage of the glow discharge in the second step of nitriding (col. 5, lines 1-12).

Second, the applicant argues that Kajikawa et al. ('277) does not disclose the claimed feature of the instant claim 14. In response, the examiner notes that as stated in the Office action dated May 16, 2008, Kajikawa et al. ('277) discloses that the workpiece is heated by heat generated by the glow discharge and the heating element in the first step and heating is effected in the second step such that an amount of heat generated by the heating element is higher than that in the first step (Fig. 4 and col. 4, line 18 to col. 5, line 12). See the heat element output increases in the beginning of the second step of nitriding (Fig. 4 and col. 5, lines 1-12).

Third, the applicant argues that there is no teaching of a gradual decrease of the DC voltage generating the glow discharge. In response, the examiner notes the reason of the rejection of the instant claim 15 as stated in the Office action dated May 16, 2008 is proper and maintained.

Fourth, the applicant argues that there is no teaching or suggestion of using an actual dummy workpiece in the same heating furnace at the same time as the treatment is taking place to provide a real time temperature correction as claimed in the instant claim 19. In response, the examiner notes that the rejection was based on the prior art's broad disclosure rather than preferred embodiments. See MPEP 2123. JP ('912) discloses measuring both radiation and contact temperatures of a hot-rolling sheet under a simulated conditions in order to measure the real surface temperature of the workpiece (abstract), which reads on the claimed method for determining the temperature of the workpiece. It would have been obvious to one of ordinary skill in the art at the time the invention was made that the contact temperature can be taken from either the workpiece directly or from a dummy workpiece in the same furnace as the workpiece as desired.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Weiping Zhu whose telephone number is 571-272-6725. The examiner can normally be reached on 8:30-16:30 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/
Supervisory Patent Examiner, Art
Unit 1793

WZ

10/22/2008